Product Information

Dynasylan® DAMO-T

N-(2-Aminoethyl)-3-aminopropyltrimethoxysilane

CAS NUMBER

1760-24-3

PRODUCT DESCRIPTION

Dynasylan® DAMO-T is a bifunctional organosilane possessing two reactive amino groups and hydrolyzable inorganic methoxysilyl groups.

The dual nature of its reactivity allows Dynasylan® DAMO-T to bind chemically to both inorganic materials (e.g. glass, metals, fillers) and organic polymers (e.g. thermosets, thermoplastics, elastomers), thus functioning as an adhesion promoter and surface modifier.

Dynasylan® DAMO-T is a yellow liquid with an amine-like odor. It is soluble in alcohols, and aliphatic or aromatic hydrocarbons.

Typical Properties

Property	Unit	Value
Chemical Name		N-(2-Aminoethyl)-3-aminopropyltrimethoxysilane
Density (20 °C) DIN 51757	g/cm³	~1.03
Flash Point DIN EN ISO 2719	°C	≤135
pH Value (10 g/L, 20 °C)		2025-02-10
Viscosity (25 °C) DIN 53015	mPa·s	~6

The data represents typical values (no product specification)

TYPICAL APPLICATIONS

Dynasylan® DAMO-T is an important additive in applications such as:

- glass fibre/glass fabric composites: as a finish or size constituent
- glass and metal primers
- foundry resins: as an additive to various types of foundry resins
- sealants and adhesives: as a primer or additive
- mineral-filled polymers (composites): for pretreatment of fillers and pigments or as an additive
- paints and coatings: as an additive and/or primer for improving adhesion to the substrate

BENEFITS & ADVANTAGES

The most important effects which can be achieved through the use of Dynasylan® DAMO-T are:

improved product properties, such as

- flexural strength, tensile strength, impact strength and modulus of elasticity
- moisture and corrosion resistance

improved in processing properties, such as adhesion

DOSAGE

Processing:

For substrate pretreatments (e.g. as a primer) Dynasylan® DAMO-T may be used as an approximately 0.5-2 wt.-% solution in an organic solvent such as alcohol, as a constituent of aqueous sizes or solutions, neat, or added to the polymer as an additive (at higher concentration: 1-10 wt.-%).

HANDLING & PROCESSING

In the presence of water the methoxy groups of Dynasylan® DAMO-T hydrolyze to form reactive silanol groups which can bond to a variety of inorganic substrates.

The organophilic diamino group of Dynasylan® DAMO-T can react with a suitable polymer.

The hydrolysis of Dynasylan® DAMO-T takes place auto-catalytically. The pH value of the hydrolysate is about 10-11. For a longer stability of the hydrolysate a pH of 4 is recommended. Examples of suitable inorganic substrates are glass or glass fibers.

Dynasylan® DAMO-T may be used with such polymers as phenolic, furan resins, PA, PBT, PC, EVA, modified PP, PVAC, PVC, acrylates and silicones.

Dynasylan® DAMO-T can undergo reactions with ketone or ester solvents. The silane or silanized substrates can react with carbon dioxide to form the corresponding carbonates and/or carbamates.

Before considering the use of Dynasylan® products please read its Safety Data Sheet (SDS) thoroughly for safety and toxicological data as well as for information on proper transportation, storage and use.

The Safety Data Sheet is available on our website https://silanes.evonik.com/en or upon request from your local representative, customer service or from Evonik Operations GmbH, Product Safety Department, E-MAIL sds-hu@evonik.com.

PACKAGING

Dynasylan® DAMO-T is supplied in 25 kg and 200 kg drums and 950 kg IBC containers.

SHELF LIFE

In the unopened container Dynasylan® DAMO-T has a shelf life of min. 12 months from delivery.

Registration Listings

Registry	Status
Australia (AIIC)	Yes
Canada (DSL)	Yes

Registration Listings

Registry	Status
China (IECSC)	Yes
EU (EINECS/ELINCS)	Yes
EU (REACH)	Yes
Japan (ENCS)	Yes
South Korea (KECL)	Yes
Philippines (PICCS)	Yes
USA (TSCA)	Yes

Disclaimer

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Evonik Operations GmbH

Smart Effects
Rodenbacher Chaussee 4
63457 Hanau
Germany
ask-se@evonik.com
ask-se-asia@evonik.com
ask-se-americas@evonik.com
www.evonik.com/smarteffects